SERCULAR

FIRE HAZARD
HEALTH HAZARD
REACTIVE
SPECIAL HAZARDS

The Indiana State Emergency Response Commission's Quarterly Newsletter *Spring 2002*

LEPCs and Deliberate Releases

Addressing Terrorist Activities in the Local Emergency Plan

In recent years, the threat of terrorist incidents involving chemical and biological materials has increased. Local emergency planning committees (LEPCs) should consider the possibility of terrorist events as they review existing plans and consider how to incorporate counter-terrorism (CT) measures into their plans. CT planning and preparedness is often an extension of existing activities, rather than a totally new effort. This factsheet discusses how LEPCs can incorporate CT issues when they review and update their local plans. This factsheet builds on the National Response Team's *Hazardous Materials Emergency Planning Guide (NRT - 1)* and supersedes "Thinking about Deliberate Releases: Steps Your Community Can Take."

BUILD ON CURRENT ACTIVITIES

Local emergency planning committees (LEPCs), established under the Emergency Planning and Community Right-to-Know Act (EPCRA), prepare and maintain comprehensive emergency plans. These plans address the extremely hazardous substances listed under EPCRA as well as thousands of hazardous chemicals for which OSHA requires Material Safety Data Sheets. Many LEPCs are already addressing CT, even if they do not use the word "terrorism." If you have developed a plan for possible accidental releases of chemicals in your community, you can use the same general planning principles for deliberate releases caused by terrorists. You may need to spend some time considering biological agents. This factsheet includes some suggestions for how you can modify your current activities to include deliberate chemical and biological releases.

MAINTAIN BROAD-BASED MEMBERSHIP

LEPC membership includes a wide variety of stakeholders, such as elected State and local officials; police; fire, civil defense, public health, environmental, hospital, and transportation officials; representatives of facilities where chemicals are stored or used; community groups; public works departments; and the media identify any specific roles each of these groups might have in the event of a terrorist attack. In addition, you might add a few new members who would bring specific expertise during a release involving biological agents (e.g., the coroner, morticians, chemistry and biology labs, university experts).

In This Issue

UPDATE AND REVISE YOUR PLANS

LEPCs should review their emergency response plans annually. Before you begin specific consideration of CT issues, ensure that your emergency plan is up-to-date.

Simply adding CT materials to an outdated plan will not create an effective emergency plan. For example, review your plan for outdated contact information, unique hazards presented by facilities that may have been constructed after the emergency response plan was first written, or new public works facilities. Also review the annual inventory reports filed under EPCRA Section 312 to determine if new chemicals or hazards are present in your community.

In addition, check Risk Management Plans submitted by facilities in your community to ensure that you address the specific hazards identified by each facility.

After you have generally updated your plan, consider adding information and procedures related to potential terrorist incidents involving weapons of mass destruction (WMD). Table I (page 6) defines each type of WMD and explains the consequences and response difficulties associated with each type.

One overall difference in dealing with a WMD incident is that law enforcement officials will be involved in the response as investigators. Officials from local, state, and federal agencies will be on the scene of an incident to collect evidence and interview survivors. Their priorities may create emergency response coordination challenges that your LEPC should address in its plan.

This portion of the factsheet suggests changes you can make to specific sections of your emergency plan.

Emergency Contact Information

In the event of a terrorist incident, rapid and secure communications will be crucial to ensure a prompt and

RELEASES.....cont'd. on page 3

CHAIRMAN'S CORNER

by Patrick R. Ralston, Chairman, Indiana Emergency Response Commission

Greetings everyone. There are some changes in the Indiana Department of Environmental Management's (IDEM) representation on the Indiana Emergency Response Commission (IERC). Because of some changes in the way industry reports are managed under SARA Title III, Bruce Palin (Deputy Assistant Commissioner for the Office of Land Quality) and Laura Steadham (Chief of the Science Services Branch) will now be proxies for IDEM Commissioner Lori Kaplan. I want to thank Max Michael and Mary Beth Tuohy for their service to the IERC as IDEM proxies over the last few years.

On-line reporting of SARA Title III information is catching on. The exact figures are not available yet, but there appears to be a large number of reporting facilities deciding to use electronic filing rather than the paper forms. We will have the exact ratio in the next Chairman's Corner.

The wave of the future is electronic. The United States Environmental Protection Agency (EPA) will issue a new version of the CAMEO/Landview program this summer. It will be available for downloading from the Internet. The new program is reportedly quicker and more suited for hazards analysis than the current version.

The EPA also has a couple of new tools for your use. Planning for oil spill exercises for drills is now easier thanks to the new Oil Spill Exercise Generator and mapping is complete for inland waterway response. The Exercise Generator provides canned inputs and messages while the maps divide Indiana into five regions and is compatible with CAMEO. For more information, contact Sheila Calovich at U.S. EPA Region V at 312-353-1505 or at:

calovich.sheila@epa.gov

by e-mail. Sheila provides details on page 7 in this edition of the *SERCULAR*.

Joe Bell and Dave Crose are working with the U.S. Department of Energy (DOE) to obtain money to train and equip responders along the routes that will be taken by transuranic radioactive waste shipments to the Waste Isolation Pilot Plant (WIPP) near Carlsbad, NM. The WIPP has been open for three years now and has received more than 700 shipments, most of them from the West Coast. It will remain open for another 32 years. When shipments from the East Coast are sent there, they will travel along I-70 and I-74 in Indiana. We can expect them to start next year.

Joe and Dave are also trying to get reimbursement from the DOE for training and equipment in preparation for the spent fuel rod shipment from West Valley, New York to Scoville, ID. It will cross the state by rail from Fort Wayne to Attica. No date has been set for the movement.

My thanks to Dave for pinch-hitting for me at the National Governors Association State Emergency Response Commission Conference in Park City, UT. He served on panels concerning the coordination of homeland security and response actions, strengthening chemical emergency response through public-private partnerships, and innovations in SERC and Local Emergency Planning Committee (LEPC) operations, where he shared our experience with on-line Tier II reporting.

Finally, the annual Chemical Stockpile Emergency Preparedness Program (CSEPP) exercise was held in early April. The scenario involved a highly unlikely fire set when a tonne container of VX was dropped during relocation and ignited by a truck battery. Indiana, the U.S. Army, Federal Emergency Management Agency Region V, Illinois, Vermillion, Parke and Fountain counties participated. Things went well overall, but areas for refinement of operations were identified. After all, that is what exercises are supposed to accomplish.

'Til next issue.

RELEASES.....from page 1

coordinated response. Your plans should include current contact information for fire, emergency medical services (EMS), law enforcement, medical, and other local departments and supporting organizations. Contact information for state officials, including those at public health agencies, the State Emergency Response Commission (SERC), state police, and emergency management agencies also should be included.

The emergency assistance telephone roster in your emergency response plan should include regular phone numbers, cell phone numbers, pager numbers, and other emergency contact information for those individuals (federal, state, local, and private sector) who have specific CT functions. The National Response Center (NRC) continues to be the sole Federal point of contact for reporting oil and chemical spills, and now provides the service of the Chemical and Biological Hotline. The NRC telephone number (800-424-8802) should be part of your emergency plan. NRC Duty Officers take reports of actual or potential domestic terrorism and link emergency calls with the Department of Defense (DOD) for technical advice on dealing with weapons of mass destruction and with the FBI to initiate the Federal response actions. The NRC also provides reports and notifications to other Federal agencies as necessary. All local plans should also include contact information for the local FBI Field Office.

Response Functions

Incident Command/Unified Command. Your emergency plan should address direction and control of responders in the event of terrorist attack. Local responders respond to an incident scene and should notify local, state, and federal authorities if terrorism appears to be involved. Local response authorities (such as a senior fire or law enforcement official) should establish control of the incident scene. The Incident Command System (ICS) that is initially established will likely transition into a Unified Command (UC). The UC structure used at the scene will expand as mutual-aid partners, and state and federal responders arrive to assist with response operations.

The FBI is the overall Lead Federal Agency (LFA) for a domestic terrorist incident involving WMD and will lead the crisis management activities (including law enforcement activities) of the response.

The Federal Emergency Management Agency (FEMA) is the lead agency for coordination of federal support to state and local responders during consequence management activities of the response. Although the FBI is always involved in response to a credible terrorist threat or attack, FEMA support is provided only after a Presidential declaration, typically after state and local agencies request its assistance.

Consequence management includes measures to protect public health and safety after an explosion or release; restore essential government services; and provide emergency relief to govenments, business, and individuals. When crisis management activities have been completed, the U.S. Attorney General may transfer the overall Lead Federal Agency role to FEMA. EPA, the Department of Health and Human Services (DHS), and DOD also have specific CT- related functions. EPA's role in counter-terrorism activities is described in a factsheet by that name, available at:

www .epa.gov/ceppo/ct-publ.htm#factsheet

Public Information

Rapid and secure communications help to ensure a prompt and coordinated response to terrorist activities. Therefore, strengthening communications among emergency responders, law enforcement officials, clinicians, emergency rooms, hospitals, and mass care providers is extremely important. Your emergency plan should include the use of accurate and timely public notification measures and warning systems in the event of a terrorist attack. Work in advance with local news media representatives to ensure their cooperation at the time of an incident. Ongoing communication of accurate and up-to-date information will help calm fears and limit the effects of the attack. The FBI will establish a Joint Information Center (JIC) to coordinate the collection and dissemination of public information.

EPA's Role in the Federal Response Plan

The multi-agency disaster response program that helps states during and after a disaster is the Federal Response Plan (FRP), which groups Federal assistance into 12 functional areas called Emergency Support Functions (ESFs). EPA is the primary agency for ESF 10, Hazardous Materials, which provides for a coordinated response to large-scale releases of hazardous materials by incorporating the response mechanisms of the National Contingency Plan (NCP). EPA assists in determining what sort of hazardous substance may be, or has been, released in a terrorist incident, and follows up with response to the incident, assisting with environmental monitoring, decontamination, and long-term site cleanup.

Activities of human services organizations, such as the Red Cross, should be included in the emergency plan.

RELEASES.....cont'd. on page 5

FIELD NOTES

by
Manuela Johnson and Ian Ewusi-Wilson , IERC Field Representatives

So What's New with CAMEO?

Many of you have been asking a number of questions about the Computer-Aided Management of Emergency Operations program commonly known as CAMEO. As IERC Field Representatives, we feel it will help all of our LEPCs if we spend the time in this column discussing the CAMEO Suite of Programs and its upcoming changes.

CAMEO is a planning tool as well as a response tool that many of you have used since its infancy. The program has matured over the years, becoming very user friendly and practical. As a relational database, CAMEO works in concert with two companion programs, ALOHA – an airborne plume generation program and MARPLOT – a mapping program. Together the three programs provide valuable data about chemicals, the hazards associated with each of the chemicals, and how large an area of concern might be if a chemical is deliberately or accidentally released into the environment.

In 1999, the US Environmental Protection Agency (US EPA) in conjunction with the National Oceanic and Atmospheric Administration (NOAA) began releasing CAMEO to the public for free. Note: In the past, the National Safety Council distributed the program for the Federal Government and provided guidance for the program. The current version of CAMEO is CAMEO 1.2.1. and was released in August of 1999 with only minor updates occurring since then. Due to feedback from users and continuous advances in computer technology, the "old" format of CAMEO needed to be updated. The CAMEO development team, made up of members from EPA and NOAA, has been redesigning CAMEO on a new base program. The redesign activities have included making changes that will make the program even more user friendly and will streamline commonly used procedures.

The new version will be using a Filemaker Pro platform and will be known as CAMEO FM. CAMEO FM will function in both the IBM Compatible PC (the most commonly used computer) and the Macintosh worlds. This is the first time the same CAMEO program will be able to run on both platforms. All of the basic functions of CAMEO will remain with CAMEO FM. The number of steps for various activities is being reduced with fewer keystrokes or mouse clicks to get the job done. The screens will give you greater overview of the program as well. And for those who like to link their files between the three programs in the CAMEO Suite, you will be able to accomplish this task in two keystrokes.

So, you may be asking, when will the new version be released? At present time, the official release date has not been released. Select CAMEO instructors throughout the country are testing the Beta version, and as imperfections are being found, they are being fixed. Manuela's best guess for a release date is sometime around July or August. Just like the 1999 version, CAMEO FM will be FREE! As we get closer to a release date, your Field Coordinators and the other SEMA staff members will be notifying you about the release of the program. As with any updates, we will be scheduling update training classes to show you the new features and how to move your current data into the CAMEO FM program. All of your current data can be moved into the CAMEO FM program, so you will not have to re-enter data such as facility information, resource information, special locations, screenings and scenarios, etc.

So as they say in TVLand…stay tuned for more information. As always, if you have any questions, please contact either one of the IERC Field Representatives, and if we don't have the answers, we will find them.

RELEASES.....from page 3

Among other activities, these organizations may use public information systems to provide human services information to the community, personal crisis counseling, provide insurance information and assistance, and provide translation services.

Public and First Responder Health and Safety

Your emergency plan should address public health and medical issues as they relate to terrorist events. The plan should include procedures to identify and treat victims, store and distribute antidotes, and handle fatalities. Mass care issues that may be different during a terrorist WMD event include decontamination, multihazard/multiagent triage, mortuary services, and notifying and working with families of any fatalities. The emergency plan should also consider the personal safety of emergency responders in the event of a terrorist attack. A terrorist chemical, biological, or radiological release may not be immediately known or apparent. Caregivers, emergency response and law enforcement personnel, and other first responders are in danger of becoming casualties before anyone realizes that a crime has occurred. Incidents could escalate quickly from one scene to multiple locations and jurisdictions.

The emergency plan should be flexible enough to accommodate evacuation or in-place sheltering. Evacuation may be required outside the perimeter of the scene to guard against further casualties from contamination by a released agent or from the possibility of additional WMD. In-place sheltering may be required if the area must be quarantined or if people are safer in a particular location.

Hazards Analysis

The hazards analysis section of an emergency plan should identify potential hazards, determine the vulnerability of an area as a result of hazards, and assess the risk of a hazardous materials release or spill. In the identification step, you should consider explosive, chemical, biological, and nuclear WMD as potential hazards.

As you conduct your hazards analysis, identify potential targets and review their vulnerability to attack. Consider the population, accessibility, impact on daily life, economic impact, and symbolic value of areas at risk. Terrorists and criminals who want to attack a particular group based on a conflict with their personal beliefs might target federal, state, or local government offices and facilities, health clinics, or religious structures. Those who want to cause maximum casualties might target public gathering places (such as sports and entertainment complexes or tourist attractions), modes of transportation (such as buses and trains -including subways), routes of transportation (including bridges), or transportation facilities (such as airport terminals). In order to damage infrastructure and interrupt day-to-day functions, a terrorist might target utilities or water and wastewater treatment plants. LEPCs should also consider emergency procedures in the event of multiple, or simultaneous, terrorist attacks. Terrorists might target first responders (e.g., fire houses, police department offices, response vehicles, and individuals) to hinder them from responding to another terrorist incident. A terrorist may seek to transform a target into a weapon by focusing on facilities that handle explosive, toxic, or volatile chemicals.

Because most public buildings and public areas must be accessible to everyone, they are highly vulnerable to attack. Other facilities, such as water treatment plants and industrial facilities, especially those with chemical or explosives storage, should have site security measures in place. You may want to discuss site security measures with these facilities to ensure that they are adequately protected. You may want to ask the facility the following questions:

- Is the facility or critical equipment and chemicals protected by fences or buildings?
- Are there systems to detect intruders (e.g., patrols, video surveillance)?
- Are there alarm systems?
- Is access to the critical areas controlled?

Do not, however, include details of the security systems in your emergency plan, because it is available to the general public.

Public works facilities and workers will assume a support role, if so requested by state and local agencies. This support role might include damage assessment, debris clearance, search and rescue, traffic control, restoration oflifeline systems, building inspection, provision of potable water and sanitation services, and flood control.

For more information on site security, read CEPPO's Chemical Safety Alerts Chemica/ Accident Prevention: Site Security (EP A K-SSO-FOO-OO2) and Anhydrous Ammonia Theft (EPA-F-00-00S), available at:

www.epa.gov/ceppo/p-small.htm#alerts.

Mitigation procedures and ongoing assessment involve consequence management activities to assess and protect the public from further exposure to hazards presented by terrorist activities. Public health officials, hazmat teams, coroners and/or medical examiners, and criminal investigators should work together to mitigate residual hazards as

RELEASES.....cont'd. on page 6

RELEASES.....from page 5

well as identify potentially large numbers of fatalities. Federal assistance should be available to support this task. Ongoing assessment activities may include environmental sampling of air, water, and soil, and insect and animal screening for chemical, biological, or radiological agents.

The criminal investigation of a terrorist attack will be a joint effort that includes many agencies. In the event of a biological attack, an epidemiological investigation may also be performed to assess the distribution of cases and sources of outbreak. The emergency plan could include a checklist of basic questions to ask when conducting interviews with victims in hospitals, sick officers, and other individuals in affected population groups. (It may be necessary to train people in how to ask such questions appropriately in stressful circumstances.)

Equipment

Your emergency response plan should include standard operating procedures on when to use specialized WMD response equipment. Local responders should be trained to use, maintain, and calibrate this specialized equipment. The Department of Justice's Office for State and Local Domestic Preparedness Support (OSLDPS) provides equipment grants and technical assistance to eligible conununities. Visit its website at:

http://www.ojp.usdoj.gov/terrorismlfunding.htm

for more information and grant application kits.

Training

The 1996 Nunn-Lugar-Domenici (NLD) legislation authorized funding to form a Domestic Preparedness (DP) training initiative. This initiative was recently transferred from DOD to the Department of Justice (DOJ), and includes a range of specialized courses, from basic awareness to discipline-specific advanced level training and exercises.

Training is available for identified cities and is directed at a broad spectrum of emergency responders from a variety of response disciplines, including fire, hazardous materials, law enforcement, emergency medical services, public health, emergency management, and public works. Additional advanced level courses involving the use of real-time experiences, live agents, and explosives are taught at cutting edge training facilities.

The NLD DP Program also includes three exercises: a chemical weapons tabletop, a biological weapons tabletop, and a chemical weapons full-scale exercise. Both types of exercises allow participants to test their knowledge and training, as well as increase the overall preparedness of responders across the jurisdiction. FEMA independently offers the following:

- Course materials on WMD and preparedness and response for terrorist incidents that can be downloaded from:

www.fema.gov/emi/termng.htm

- A terrorism consequence management course at their Mount Weather Emergency Assistance Center. Contact the training officer in your State Training Office of Emergency Services for information on course schedules and application procedures. A list of offices and contact information is located at:

www .fema.gov/emi/sttrgo.htm

- Information on the Incident Command System (ICS) training conducted by each State Training Office of Emergency Services. For more details visit:

www.fema.gov/emi/nrcrs.htm

- In conjunction with the National Fire Academy, an independent study course in emergency response to terrorism, located at:

www.fema.gov/emi/crslist.htm

Resources

LEPCs seeking assistance in terrorism-related emergency planning should begin with their SERCs. The SERC can direct LEPCs to appropriate assistance at the national and state level. and may be able to facilitate LEPCs in a given region working together to address possible terrorist activities.

There are currently many federal agencies involved in some aspect of counter-terrorism. Many of these agencies support websites. Because of the continual changes in the world of CT, however, many websites become outdated or are even discontinued without warning. Therefore, we recommend that LEPCs consult EPA's Chemical Emergency Preparedness and Prevention Office (CEPPO) website at:

www.epa.gov/ceppo/cntr-ter.html

This address is updated every two months and includes the latest links to the following types of information: federal departments and agencies, health and medical, technical information and resource, and international sources.

For More Information:
Contact the EPCRA Hotline at:
(800) 424-9346 or (703) 412-9810
TOO (800) 553-7672
Monday -Friday, 9 AM to 6 PM, EST
Visit the CEPPO Home Page at:

www .epa.gov/ceppo/

RELEASES....see Table on page 8

Oil Spill Exercise Generator Software

If you're planning or developing an oil spill exercise or response drill, the *Oil Spill Exercise Generator* can help you complete that task in a matter of hours. The program will, with appropriate inputs by the user, write a scenario, provide canned weather, and provide inputs or messages. The user must add in all appropriate references to customize the scenario and messages to a locality. The weather is set to a default, but may be customized, as well.

In addition, an evaluation checklist is provided for each of the exercise objectives listed in the Preparedness for Response Exercise Program (PREP) developed by the US Environmental Protection Agency (EPA), the US Coast Guard, the Office of Pipeline Safety, and the Mines and Minerals Service. The evaluation form, if filled out and transferred into a word processing system, will provide the basis for the development of an evaluation report.

The program provides the tools for an evaluator to use, but does not replace the invaluable presence of a knowledgeable and independent evaluator. An evaluator is essential to see the complex interactions that drive decision-making and to appreciate the choices made or not made by the players. Suggestions for improvement come from the evaluator's experience and not from this program. Many other tasks go into the development, conduct, and evaluation of a successful exercise. For a more comprehensive discussion of the entire exercise process, please consult other documents such as *NRT-2, Developing a Hazardous Materials Exercise Program, a Handbook for State and Local Officials*.

Since August 2001, the Oil Planning and Response Section (OPRS) at US EPA Region 5 has copied and distributed to 45 countries worldwide and to all 50 States 800 copies of the *Oil Spill Exercise Generator*. The *Oil Spill Exercise Generator* was developed by US EPA Region 5 and Purdue University. While quantities last, EPA will provide free copies of the program on CD. We cannot fill bulk orders, but you can make copies of the CD we send you. You can order the CD online at***:***

http://www.epa.gov/seahome/oilspill.html

U.S. EPA Region 5's Inland Waterways Spill Response Mapping Project Completes Mapping for Indiana

The mission of this mapping project is to provide community planners and oil spill responders with spatial information on resources at risk during a spill. This mapping project largely owes its existence to the 1989 oil spill from the Exxon Valdez. Shortly after the disaster, the U.S. Congress passed the Oil Pollution Act of 1990 as an amendment to the Clean Water Act. The Oil Pollution Act mandates that the Environmental Protection Agency and the U.S. Coast Guard prepare Area Contingency Plans to improve the efficiency of spill response efforts. The Area Contingency Plan must identify environmentally and economically sensitive areas. Responders to inland waterway spills are especially concerned about the increased potential for contaminating water supplies and other sensitive environmental areas.

The U.S. EPA Region 5 provides funding and overall project coordination for the mapping process. The Great Lakes Commission (GLC) and Upper Mississippi River Basin Association (UMRBA) collect data that are later processed at the U.S. Geological Survey (USGS), Upper Midwest Environmental Sciences Center (UMESC). The data are automated utilizing geographic information system (GIS) software. Once automated, the spatial databases can be displayed as hard copy maps or interactive GIS coverages. The following data points are gathered and mapped: Sensitive Species, Natural Resource Areas, Marinas, Locks and Dams, Water Intakes, Fixed Oil Storage Facilities, Pipelines, Boat Accesses. These maps are compatible with CAMEO.

The Inland Spill Response Mapping Project processes collected resource data to create Inland Sensitivity Atlases. These atlases are being generated for 35 mapping areas throughout U.S. EPA Region 5. They include data layers, maps, and other information needed to prepare for and quickly respond to oil spills. The atlas information is available in hard copy and CD formats and is also served through a web page. The web site address is:

http://www.umesc.usgs.gov/epa_atlas/overview.html

The available data and maps are provided in several data formats. You may download data by mapping areas after filling out a brief registration form.

The mapping of the State of Indiana was recently completed. Please the see detailed map on the IERC's Web site at:

http://www.state.in.us/ierc/index.html

(Click on Spill Response Mapping Project).

For more information about the mapping project, or to order a CD, please contact Sheila Calovich at U.S. EPA Region 5 at 312-353-1505 or at:

calovich.sheila@epa.gov

The *SERCULAR* is the newsletter of the Indiana Emergency Response Commission

Frank O'Bannon, Governor
Patrick Ralston, IERC Chair
Lori Kaplan, IERC Vice-Chair
Sherman Greer, *SERCULAR* Editor
Ken Rogers, *SERCULAR* Managing Editor

Communications Committee Members/Editorial Advisors:
David Crose, SEMA
Kathy Dayhoff-Dwyer, Bartholomew County LEPC
Sam George, IERC
James Pridgen, IERC
Alden Taylor, SEMA

The *SERCULAR*
302 W. Washington Street, Room E-208
Indianapolis, IN 46204-2560
(317) 232-3830
http//:www.state.in.us/ierc

Printed on recycled paper

For Additional Information Call 1-800-434-9974

RELEASES**.....**from page 6

Table I
Weapons of Mass Destruction (WMD) Definitions, Consequences, and Response Difficulties

Type of WMD	Definition (according to Title 18, USC 2332a)	Consequences	Response Difficulties
Explosives	Any explosive, incendiary, or poison gas bomb, grenade, rocket ...missile ...mine or device similar to the above	Deaths, injuries, damaged structures	Similar to that of other explosions and large fires
Chemical	Poison gas, blister gas	Deaths, injuries, possible contamination, possible long-term effects	Similar to accidents planned for in current LEPC emergency response plan, but could be more extensive in effect (e.g., VX release in a crowded convention center or school
Biological	Any weapon involving a disease organism	Deaths, injuries, contamination, long-term, far-reaching geographic effects	Agents may be unknown; Locations may vary and multiply as people travel
Nuclear	Any weapon that is designed to release radiation or radioactivity at a level dangerous to human life	Deaths, injuries, contamination, possible long- term, far-reaching effects	Similar to that of other explosions and large fires plus radiation; could have long-term, far-reaching effects